

**From:** [R4LIMS](#)  
**To:** [Berry, Chuck](#)  
**Cc:** [Turner, Nardina](#); [Lkrebs@otie.com](#); [Saskowski, Ronald](#); [gkowsalski@otie.com](#); [Wellborn, Floyd](#); [Aker, Sandra](#)  
**Subject:** R4 LIMS Results: Project 19-0267, E191906 PHYSP TMTL 05 23 19 1628  
**Date:** Thursday, May 23, 2019 10:46:45 PM  
**Attachments:** [E191906 PHYSP TMTL FINAL 05 23 19 1628.PDF](#)  
[E191906 PHYSP TMTL FINAL 05 23 19 1628 - 19-0267 - ELM STREET LEAD 05-23-2019.GAN000407160.Dat](#)

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On Thursday, May 23, 2019, results for the following were released by the Region 4 Laboratory:

**Analyses:**

Physical Properties (PHYSP)

Total Metals (TMTL)

**Project Number:** 19-0267

**Project Name:** Elm Street Lead

**City:** Atlanta    **County:** Fulton    **State:** GA

**These results were reported by:**

**Floyd Wellborn** ( E-mail: [Wellborn.Floyd@epa.gov](mailto:Wellborn.Floyd@epa.gov) )

If you have questions concerning the laboratory results, please feel free to contact the laboratory personnel shown above as having reported the data. We also encourage you to provide feedback to the Region 4 laboratory by filling out our online (*EPA internal network only*) [Customer Survey Form](#).

**These results are for the following Sample Type(s):**

Soil (Surface Soil)

**PDF DATA RESULTS REPORT FILE ATTACHMENT:**

An Adobe Acrobat PDF file is attached to this message that contains final results for the analyses as indicated in the data report.

**DATA EXPORT FILE ATTACHMENT:**

If attached, data export files will be tab delimited ASCII text files contained in a file that has been formatted using the ZIP archiving format (.Dat extension). Please consult your local computer support personnel if you have problems extracting these files. If you have questions about the data file formats and the information contained in these files, or if you would like to request export files for previously reported data, use the contact information shown below to contact the appropriate person with your concerns. To generate export files for previously reported data we'll need the name of the PDF report file that was attached to the original transmittal message.

For questions concerning this message and attachments, or any other LIMS or data reporting issues, please call the LSASD PC Hotline at 706-355-8825 or send an email to [r4lims@epa.gov](mailto:r4lims@epa.gov).

**SAMPLE DISPOSAL POLICY:**

Due to limited space for long term sample storage, LSB's policy is to dispose of samples on a periodic schedule. Air samples collected in summa canisters will be disposed of 30 days following the issuance of this report. All other sample media including original samples, sample extracts and or digestates will be disposed of, in accordance with applicable regulations, 60 days from the date of this report.

This sample disposal policy does not apply to criminal samples which are held until the laboratory is notified by the criminal investigators that case development and litigation are complete.

These samples may be held in the laboratory's custody for a longer period of time. If samples require storage beyond the 60-day period, please contact the Sample Control Coordinator by e-mail at [R4SampleCustody@epa.gov](mailto:R4SampleCustody@epa.gov).

**\*\*CONFIDENTIALITY NOTICE\*\***

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Region 4 Laboratory Services and Applied Science Division

980 College Station Road, Athens, Georgia 30605-2700

D.A.R.T. Id: 19-0267

Project: 19-0267, Elm Street Lead - Reported by Floyd Wellborn

May 23, 2019

**MEMORANDUM**

**SUBJECT:** FINAL Analytical Report  
Project: 19-0267, Elm Street Lead

**FROM:** Floyd Wellborn  
LSB Inorganic Chemistry Section Chief

**THRU:** Sandra Aker, Chief  
Laboratory Services Branch

**TO:** Chuck Berry

Attached are the final results for the analytical groups listed below. This report shall not be reproduced except in full without approval of the Region 4 laboratory. These analyses were performed in accordance with the Laboratory Services Branch's Laboratory Operations and Quality Assurance Manual (LSB LOQAM) found at [www.epa.gov/region4/sesd/asbsop](http://www.epa.gov/region4/sesd/asbsop). Any unique project data quality objectives specified in writing by the data requestor have also been incorporated into the data unless otherwise noted in the Report Narrative. Chemistry data have been verified based on the LSB LOQAM specifications and have been qualified by this laboratory if the applicable quality control criteria were not met. Verification is defined in Chapter 5 of the LSB LOQAM. For a listing of specific data qualifiers and explanations, please refer to the Data Qualifier Definitions included in this report. The reported results are accurate within the limits of the method(s) and are representative only of the samples as received by the laboratory.

Analyses Included in this report:	Method Used:	Accreditations:
<b>Physical Properties (PHYSP)</b>		
Physical Properties	EPA 200.2 (Soil)	ISO
<b>Total Metals (TMTL)</b>		
Total Metals	EPA 200.8 (Soil)	ISO
Total Metals	EPA 6010 (Soil)	ISO



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cc: Nardina Turner



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D.A.R.T. Id: 19-0267

Project: 19-0267, Elm Street Lead - Reported by Floyd Wellborn

**SAMPLES INCLUDED IN THIS REPORT**

**Project: 19-0267, Elm Street Lead**

Sample ID	Laboratory ID	Matrix	Date Collected	Date Received
ESL-1008B-050319-S3	E191906-01	Surface Soil	5/3/19 11:20	5/9/19 10:30
ESL-1008C-050319-S3	E191906-02	Surface Soil	5/3/19 11:30	5/9/19 10:30
ESL-1018A-050319-S3	E191906-03	Surface Soil	5/3/19 13:10	5/9/19 10:30
ESL-1028A-050319-S3	E191906-04	Surface Soil	5/3/19 10:30	5/9/19 10:30
ESL-1037A-050319-S3	E191906-05	Surface Soil	5/3/19 13:20	5/9/19 10:30
ESL-1039B Dup-050319-S3	E191906-06	Surface Soil	5/3/19 09:30	5/9/19 10:30
ESL-1039B-050319-S3	E191906-07	Surface Soil	5/3/19 09:30	5/9/19 10:30
ESL-1039C-050319-S3	E191906-08	Surface Soil	5/3/19 09:30	5/9/19 10:30





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D.A.R.T. Id: 19-0267

Project: 19-0267, Elm Street Lead - Reported by Floyd Wellborn

### DATA QUALIFIER DEFINITIONS

U The analyte was not detected at or above the reporting limit.

### ACRONYMS AND ABBREVIATIONS

CAS Chemical Abstracts Service

Note: Analytes with no known CAS identifiers have been assigned codes beginning with "E", the EPA ID as assigned by the EPA Substance Registry System ([www.epa.gov/srs](http://www.epa.gov/srs)), or beginning with "R4-", a unique identifier assigned by the EPA Region 4 laboratory.

MDL Method Detection Limit - The minimum concentration of a substance (an analyte) that can be measured and reported with a 99% confidence that the analyte concentration is greater than zero.

MRL Minimum Reporting Limit - Analyte concentration that corresponds to the lowest demonstrated level of acceptable quantitation. The MRL is sample-specific and accounts for preparation weights and volumes, dilutions, and moisture content of soil/sediments.

TIC Tentatively Identified Compound - An analyte identified based on a match with the instrument software's mass spectral library. A calibration standard has not been analyzed to confirm the compound's identification or the estimated concentration reported.

#### ACCREDITATIONS:

ISO ASB is accredited by ISO/IEC 17025, including an amplification for forensic accreditation through ANSI-ASQ National Accreditation Board.

Refer to the certificate and scope of accreditation AT-1644 at:  
<http://www.epa.gov/aboutepa/about-region-4s-science-and-ecosystem-support-division-sesd>

NR The EPA Region 4 Laboratory has not requested accreditation for this test.



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Region 4 Laboratory Services and Applied Science Division

980 College Station Road, Athens, Georgia 30605-2700

D.A.R.T. Id: 19-0267

Project: 19-0267, Elm Street Lead - Reported by Floyd Wellborn

## Total Metals

Project: 19-0267, Elm Street Lead

Sample ID: ESL-1008B-050319-S3

Lab ID: E191906-01

Station ID: ESL1008B

Matrix: Surface Soil

Date Collected: 5/3/19 11:20

CAS Number	Analyte	Results	Qualifiers	Units	MRL	Prepared	Analyzed	Method
7440-38-2	Arsenic	1.8		mg/kg dry	0.20	5/14/19 13:32	5/20/19 18:38	EPA 200.8
7440-39-3	Barium	200		mg/kg dry	1.5	5/14/19 13:29	5/15/19 16:33	EPA 6010
7440-43-9	Cadmium	0.35		mg/kg dry	0.10	5/14/19 13:32	5/20/19 18:38	EPA 200.8
7440-47-3	Chromium	19		mg/kg dry	1.5	5/14/19 13:29	5/15/19 16:33	EPA 6010
7439-92-1	Lead	100		mg/kg dry	1.0	5/14/19 13:32	5/20/19 18:43	EPA 200.8
7439-97-6	Mercury	0.087		mg/kg dry	0.080	5/14/19 13:32	5/20/19 18:38	EPA 200.8
7782-49-2	Selenium	0.40	U	mg/kg dry	0.40	5/14/19 13:32	5/20/19 18:38	EPA 200.8
7440-22-4	Silver	1.5	U	mg/kg dry	1.5	5/14/19 13:29	5/15/19 16:33	EPA 6010



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D.A.R.T. Id: 19-0267

Project: 19-0267, Elm Street Lead - Reported by Floyd Wellborn

## Physical Properties

Project: 19-0267, Elm Street Lead

Sample ID: ESL-1008B-050319-S3

Lab ID: E191906-01

Station ID: ESL1008B

Matrix: Surface Soil

Date Collected: 5/3/19 11:20

CAS Number	Analyte	Results	Qualifiers	Units	MRL	Prepared	Analyzed	Method
E1642941	% Solids	95		%	0.0	5/13/19 16:21	5/14/19 10:35	EPA 200.2





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D.A.R.T. Id: 19-0267

Project: 19-0267, Elm Street Lead - Reported by Floyd Wellborn

## Total Metals

Project: 19-0267, Elm Street Lead

Sample ID: ESL-1008C-050319-S3

Lab ID: E191906-02

Station ID: ESL1008C

Matrix: Surface Soil

Date Collected: 5/3/19 11:30

CAS Number	Analyte	Results	Qualifiers	Units	MRL	Prepared	Analyzed	Method
7440-38-2	Arsenic	1.5		mg/kg dry	0.20	5/14/19 13:32	5/20/19 19:00	EPA 200.8
7440-39-3	Barium	300		mg/kg dry	1.5	5/14/19 13:29	5/15/19 16:42	EPA 6010
7440-43-9	Cadmium	0.17		mg/kg dry	0.099	5/14/19 13:32	5/20/19 19:00	EPA 200.8
7440-47-3	Chromium	20		mg/kg dry	1.5	5/14/19 13:29	5/15/19 16:42	EPA 6010
7439-92-1	Lead	57		mg/kg dry	0.99	5/14/19 13:32	5/20/19 19:05	EPA 200.8
7439-97-6	Mercury	0.10		mg/kg dry	0.079	5/14/19 13:32	5/20/19 19:00	EPA 200.8
7782-49-2	Selenium	0.40	U	mg/kg dry	0.40	5/14/19 13:32	5/20/19 19:00	EPA 200.8
7440-22-4	Silver	1.5	U	mg/kg dry	1.5	5/14/19 13:29	5/15/19 16:42	EPA 6010



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D.A.R.T. Id: 19-0267

Project: 19-0267, Elm Street Lead - Reported by Floyd Wellborn

## Physical Properties

**Project: 19-0267, Elm Street Lead**

**Sample ID:** ESL-1008C-050319-S3

**Lab ID:** E191906-02

**Station ID:** ESL1008C

**Matrix:** Surface Soil

**Date Collected:** 5/3/19 11:30

<i>CAS Number</i>	<i>Analyte</i>	<i>Results</i>	<i>Qualifiers</i>	<i>Units</i>	<i>MRL</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Method</i>
E1642941	% Solids	96		%	0.0	5/13/19 16:21	5/14/19 10:35	EPA 200.2



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D.A.R.T. Id: 19-0267

Project: 19-0267, Elm Street Lead - Reported by Floyd Wellborn

## Total Metals

Project: 19-0267, Elm Street Lead

Sample ID: ESL-1018A-050319-S3

Lab ID: E191906-03

Station ID: ESL1018A

Matrix: Surface Soil

Date Collected: 5/3/19 13:10

<i>CAS Number</i>	<i>Analyte</i>	<i>Results</i>	<i>Qualifiers</i>	<i>Units</i>	<i>MRL</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Method</i>
7440-38-2	Arsenic	2.5		mg/kg dry	0.20	5/14/19 13:32	5/20/19 19:21	EPA 200.8
7440-39-3	Barium	370		mg/kg dry	1.5	5/14/19 13:29	5/15/19 16:48	EPA 6010
7440-43-9	Cadmium	1.1		mg/kg dry	0.098	5/14/19 13:32	5/20/19 19:21	EPA 200.8
7440-47-3	Chromium	25		mg/kg dry	1.5	5/14/19 13:29	5/15/19 16:48	EPA 6010
7439-92-1	Lead	420		mg/kg dry	4.9	5/14/19 13:32	5/20/19 19:27	EPA 200.8
7439-97-6	Mercury	0.27		mg/kg dry	0.078	5/14/19 13:32	5/20/19 19:21	EPA 200.8
7782-49-2	Selenium	0.39	U	mg/kg dry	0.39	5/14/19 13:32	5/20/19 19:21	EPA 200.8
7440-22-4	Silver	1.5	U	mg/kg dry	1.5	5/14/19 13:29	5/15/19 16:48	EPA 6010



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Region 4 Laboratory Services and Applied Science Division

980 College Station Road, Athens, Georgia 30605-2700

D.A.R.T. Id: 19-0267

Project: 19-0267, Elm Street Lead - Reported by Floyd Wellborn

## Physical Properties

**Project: 19-0267, Elm Street Lead**

**Sample ID:** ESL-1018A-050319-S3

**Lab ID:** E191906-03

**Station ID:** ESL1018A

**Matrix:** Surface Soil

**Date Collected:** 5/3/19 13:10

<i>CAS Number</i>	<i>Analyte</i>	<i>Results</i>	<i>Qualifiers</i>	<i>Units</i>	<i>MRL</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Method</i>
E1642941	% Solids	97		%	0.0	5/13/19 16:21	5/14/19 10:35	EPA 200.2



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Region 4 Laboratory Services and Applied Science Division

980 College Station Road, Athens, Georgia 30605-2700

D.A.R.T. Id: 19-0267

Project: 19-0267, Elm Street Lead - Reported by Floyd Wellborn

## Total Metals

Project: 19-0267, Elm Street Lead

Sample ID: ESL-1028A-050319-S3

Lab ID: E191906-04

Station ID: ESL1028A

Matrix: Surface Soil

Date Collected: 5/3/19 10:30

CAS Number	Analyte	Results	Qualifiers	Units	MRL	Prepared	Analyzed	Method
7440-38-2	Arsenic	1.4		mg/kg dry	0.20	5/14/19 13:32	5/20/19 19:32	EPA 200.8
7440-39-3	Barium	120		mg/kg dry	1.5	5/14/19 13:29	5/15/19 16:51	EPA 6010
7440-43-9	Cadmium	0.57		mg/kg dry	0.099	5/14/19 13:32	5/20/19 19:32	EPA 200.8
7440-47-3	Chromium	17		mg/kg dry	1.5	5/14/19 13:29	5/15/19 16:51	EPA 6010
7439-92-1	Lead	470		mg/kg dry	4.9	5/14/19 13:32	5/20/19 19:37	EPA 200.8
7439-97-6	Mercury	0.13		mg/kg dry	0.079	5/14/19 13:32	5/20/19 19:32	EPA 200.8
7782-49-2	Selenium	0.39	U	mg/kg dry	0.39	5/14/19 13:32	5/20/19 19:32	EPA 200.8
7440-22-4	Silver	1.5	U	mg/kg dry	1.5	5/14/19 13:29	5/15/19 16:51	EPA 6010



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980 College Station Road, Athens, Georgia 30605-2700

D.A.R.T. Id: 19-0267

Project: 19-0267, Elm Street Lead - Reported by Floyd Wellborn

## Physical Properties

Project: 19-0267, Elm Street Lead

Sample ID: ESL-1028A-050319-S3

Lab ID: E191906-04

Station ID: ESL1028A

Matrix: Surface Soil

Date Collected: 5/3/19 10:30

CAS Number	Analyte	Results	Qualifiers	Units	MRL	Prepared	Analyzed	Method
E1642941	% Solids	96		%	0.0	5/13/19 16:21	5/14/19 10:35	EPA 200.2





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D.A.R.T. Id: 19-0267

Project: 19-0267, Elm Street Lead - Reported by Floyd Wellborn

## Total Metals

Project: 19-0267, Elm Street Lead

Sample ID: ESL-1037A-050319-S3

Lab ID: E191906-05

Station ID: ESL1037A

Matrix: Surface Soil

Date Collected: 5/3/19 13:20

CAS Number	Analyte	Results	Qualifiers	Units	MRL	Prepared	Analyzed	Method
7440-38-2	Arsenic	5.7		mg/kg dry	0.20	5/14/19 13:32	5/20/19 19:43	EPA 200.8
7440-39-3	Barium	250		mg/kg dry	1.5	5/14/19 13:29	5/15/19 16:54	EPA 6010
7440-43-9	Cadmium	1.1		mg/kg dry	0.099	5/14/19 13:32	5/20/19 19:43	EPA 200.8
7440-47-3	Chromium	33		mg/kg dry	1.5	5/14/19 13:29	5/15/19 16:54	EPA 6010
7439-92-1	Lead	290		mg/kg dry	5.0	5/14/19 13:32	5/20/19 19:48	EPA 200.8
7439-97-6	Mercury	0.35		mg/kg dry	0.079	5/14/19 13:32	5/20/19 19:43	EPA 200.8
7782-49-2	Selenium	0.41		mg/kg dry	0.40	5/14/19 13:32	5/20/19 19:43	EPA 200.8
7440-22-4	Silver	1.5 U		mg/kg dry	1.5	5/14/19 13:29	5/15/19 16:54	EPA 6010



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D.A.R.T. Id: 19-0267

Project: 19-0267, Elm Street Lead - Reported by Floyd Wellborn

## Physical Properties

**Project: 19-0267, Elm Street Lead**

**Sample ID:** ESL-1037A-050319-S3

**Lab ID:** E191906-05

**Station ID:** ESL1037A

**Matrix:** Surface Soil

**Date Collected:** 5/3/19 13:20

<i>CAS Number</i>	<i>Analyte</i>	<i>Results</i>	<i>Qualifiers</i>	<i>Units</i>	<i>MRL</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Method</i>
E1642941	% Solids	95		%	0.0	5/13/19 16:21	5/14/19 10:35	EPA 200.2



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D.A.R.T. Id: 19-0267

Project: 19-0267, Elm Street Lead - Reported by Floyd Wellborn

## Total Metals

Project: 19-0267, Elm Street Lead

Sample ID: ESL-1039B Dup-050319-S3

Lab ID: E191906-06

Station ID: ESL1039B

Matrix: Surface Soil

Date Collected: 5/3/19 9:30

<i>CAS Number</i>	<i>Analyte</i>	<i>Results</i>	<i>Qualifiers</i>	<i>Units</i>	<i>MRL</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Method</i>
7440-38-2	Arsenic	3.0		mg/kg dry	0.20	5/14/19 13:32	5/20/19 20:04	EPA 200.8
7440-39-3	Barium	270		mg/kg dry	1.5	5/14/19 13:29	5/15/19 16:57	EPA 6010
7440-43-9	Cadmium	0.70		mg/kg dry	0.10	5/14/19 13:32	5/20/19 20:04	EPA 200.8
7440-47-3	Chromium	15		mg/kg dry	1.5	5/14/19 13:29	5/15/19 16:57	EPA 6010
7439-92-1	Lead	580		mg/kg dry	5.0	5/14/19 13:32	5/20/19 20:10	EPA 200.8
7439-97-6	Mercury	0.21		mg/kg dry	0.080	5/14/19 13:32	5/20/19 20:04	EPA 200.8
7782-49-2	Selenium	0.40	U	mg/kg dry	0.40	5/14/19 13:32	5/20/19 20:04	EPA 200.8
7440-22-4	Silver	1.5	U	mg/kg dry	1.5	5/14/19 13:29	5/15/19 16:57	EPA 6010



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980 College Station Road, Athens, Georgia 30605-2700

D.A.R.T. Id: 19-0267

Project: 19-0267, Elm Street Lead - Reported by Floyd Wellborn

## Physical Properties

**Project: 19-0267, Elm Street Lead**

**Sample ID:** ESL-1039B Dup-050319-S3

**Lab ID:** E191906-06

**Station ID:** ESL1039B

**Matrix:** Surface Soil

**Date Collected:** 5/3/19 9:30

<i>CAS Number</i>	<i>Analyte</i>	<i>Results</i>	<i>Qualifiers</i>	<i>Units</i>	<i>MRL</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Method</i>
E1642941	% Solids	95		%	0.0	5/13/19 16:21	5/14/19 10:35	EPA 200.2



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D.A.R.T. Id: 19-0267

Project: 19-0267, Elm Street Lead - Reported by Floyd Wellborn

## Total Metals

Project: 19-0267, Elm Street Lead

Sample ID: ESL-1039B-050319-S3

Lab ID: E191906-07

Station ID: ESL1039B

Matrix: Surface Soil

Date Collected: 5/3/19 9:30

CAS Number	Analyte	Results	Qualifiers	Units	MRL	Prepared	Analyzed	Method
7440-38-2	Arsenic	3.5		mg/kg dry	0.20	5/14/19 13:32	5/20/19 20:15	EPA 200.8
7440-39-3	Barium	250		mg/kg dry	1.5	5/14/19 13:29	5/15/19 17:00	EPA 6010
7440-43-9	Cadmium	0.58		mg/kg dry	0.10	5/14/19 13:32	5/20/19 20:15	EPA 200.8
7440-47-3	Chromium	15		mg/kg dry	1.5	5/14/19 13:29	5/15/19 17:00	EPA 6010
7439-92-1	Lead	510		mg/kg dry	5.0	5/14/19 13:32	5/20/19 20:21	EPA 200.8
7439-97-6	Mercury	0.18		mg/kg dry	0.080	5/14/19 13:32	5/20/19 20:15	EPA 200.8
7782-49-2	Selenium	0.40	U	mg/kg dry	0.40	5/14/19 13:32	5/20/19 20:15	EPA 200.8
7440-22-4	Silver	1.5	U	mg/kg dry	1.5	5/14/19 13:29	5/15/19 17:00	EPA 6010



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Region 4 Laboratory Services and Applied Science Division

980 College Station Road, Athens, Georgia 30605-2700

D.A.R.T. Id: 19-0267

Project: 19-0267, Elm Street Lead - Reported by Floyd Wellborn

## Physical Properties

**Project: 19-0267, Elm Street Lead**

**Sample ID:** ESL-1039B-050319-S3

**Lab ID:** E191906-07

**Station ID:** ESL1039B

**Matrix:** Surface Soil

**Date Collected:** 5/3/19 9:30

<i>CAS Number</i>	<i>Analyte</i>	<i>Results</i>	<i>Qualifiers</i>	<i>Units</i>	<i>MRL</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Method</i>
E1642941	% Solids	96		%	0.0	5/13/19 16:21	5/14/19 10:35	EPA 200.2





UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Region 4 Laboratory Services and Applied Science Division

980 College Station Road, Athens, Georgia 30605-2700

D.A.R.T. Id: 19-0267

Project: 19-0267, Elm Street Lead - Reported by Floyd Wellborn

## Total Metals

Project: 19-0267, Elm Street Lead

Sample ID: ESL-1039C-050319-S3

Lab ID: E191906-08

Station ID: ESL1039C

Matrix: Surface Soil

Date Collected: 5/3/19 9:30

CAS Number	Analyte	Results	Qualifiers	Units	MRL	Prepared	Analyzed	Method
7440-38-2	Arsenic	2.4		mg/kg dry	0.20	5/14/19 13:32	5/20/19 20:26	EPA 200.8
7440-39-3	Barium	280		mg/kg dry	1.5	5/14/19 13:29	5/15/19 17:03	EPA 6010
7440-43-9	Cadmium	0.63		mg/kg dry	0.10	5/14/19 13:32	5/20/19 20:26	EPA 200.8
7440-47-3	Chromium	14		mg/kg dry	1.5	5/14/19 13:29	5/15/19 17:03	EPA 6010
7439-92-1	Lead	600		mg/kg dry	5.0	5/14/19 13:32	5/20/19 20:31	EPA 200.8
7439-97-6	Mercury	0.28		mg/kg dry	0.080	5/14/19 13:32	5/20/19 20:26	EPA 200.8
7782-49-2	Selenium	0.40	U	mg/kg dry	0.40	5/14/19 13:32	5/20/19 20:26	EPA 200.8
7440-22-4	Silver	1.5	U	mg/kg dry	1.5	5/14/19 13:29	5/15/19 17:03	EPA 6010



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Region 4 Laboratory Services and Applied Science Division

980 College Station Road, Athens, Georgia 30605-2700

D.A.R.T. Id: 19-0267

Project: 19-0267, Elm Street Lead - Reported by Floyd Wellborn

## Physical Properties

Project: 19-0267, Elm Street Lead

Sample ID: ESL-1039C-050319-S3

Lab ID: E191906-08

Station ID: ESL1039C

Matrix: Surface Soil

Date Collected: 5/3/19 9:30

CAS Number	Analyte	Results	Qualifiers	Units	MRL	Prepared	Analyzed	Method
E1642941	% Solids	94		%	0.0	5/13/19 16:21	5/14/19 10:35	EPA 200.2



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Region 4 Laboratory Services and Applied Science Division

980 College Station Road, Athens, Georgia 30605-2700

D.A.R.T. Id: 19-0267

Project: 19-0267, Elm Street Lead - Reported by Floyd Wellborn

**Total Metals (TMTL) - Quality Control**

**US-EPA, Region 4, LSASD**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch 1905068 - M 200.2 Metals Soil**

**Blank (1905068-BLK1)**

Prepared: 05/14/19 Analyzed: 05/15/19

**EPA 6010**

Barium	U	0.50	mg/kg dry							U
Chromium	U	0.50	"							U
Silver	U	0.50	"							U

**Blank (1905068-BLK2)**

Prepared: 05/14/19 Analyzed: 05/15/19

**EPA 6010**

Barium	U	0.50	mg/kg dry							U
Chromium	U	0.50	"							U
Silver	U	0.50	"							U

**LCS (1905068-BS1)**

Prepared: 05/14/19 Analyzed: 05/15/19

**EPA 6010**

Barium	50.389	0.50	mg/kg dry	50.000		101	85-115			
Chromium	49.286	0.50	"	50.000		98.6	85-115			
Silver	9.3962	0.50	"	10.000		94.0	85-115			

**Matrix Spike (1905068-MS1)**

Source: E191906-01

Prepared: 05/14/19 Analyzed: 05/15/19

**EPA 6010**

Barium	236.98	1.5	mg/kg dry	49.476	199.47	75.8	75-125			
Chromium	64.350	1.5	"	49.476	18.887	91.9	75-125			
Silver	8.8480	1.5	"	9.8951	U	89.4	75-125			

**Matrix Spike Dup (1905068-MSD1)**

Source: E191906-01

Prepared: 05/14/19 Analyzed: 05/15/19

**EPA 6010**

Barium	246.22	1.5	mg/kg dry	49.811	199.47	93.9	75-125	3.82	20	
Chromium	65.040	1.5	"	49.811	18.887	92.7	75-125	1.07	20	
Silver	9.0335	1.5	"	9.9621	U	90.7	75-125	2.07	20	

**MRL Verification (1905068-PS1)**

Prepared: 05/14/19 Analyzed: 05/15/19

**EPA 6010**

Barium	0.51827	0.50	mg/kg dry	0.50000		104	70-130			MRL-3
Chromium	0.58254	0.50	"	0.50000		117	70-130			MRL-3
Silver	0.54760	0.50	"	0.50000		110	70-130			MRL-3



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Region 4 Laboratory Services and Applied Science Division

980 College Station Road, Athens, Georgia 30605-2700

D.A.R.T. Id: 19-0267

Project: 19-0267, Elm Street Lead - Reported by Floyd Wellborn

**Total Metals (TMTL) - Quality Control**

**US-EPA, Region 4, LSASD**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch 1905069 - M 200.2 Metals Soil**

**Blank (1905069-BLK1)**

Prepared: 05/14/19 Analyzed: 05/20/19

**EPA 200.8**

Arsenic	U	0.10	mg/kg dry							U
Cadmium	U	0.050	"							U
Lead	U	0.10	"							U
Mercury	U	0.040	"							U
Selenium	U	0.20	"							U

**Blank (1905069-BLK2)**

Prepared: 05/14/19 Analyzed: 05/20/19

**EPA 200.8**

Arsenic	U	0.10	mg/kg dry							U
Cadmium	U	0.050	"							U
Lead	0.20030	0.10	"							B-3
Mercury	U	0.040	"							U
Selenium	U	0.20	"							U

**LCS (1905069-BS1)**

Prepared: 05/14/19 Analyzed: 05/20/19

**EPA 200.8**

Arsenic	48.693	1.2	mg/kg dry	50.000		97.4	85-115			
Cadmium	20.004	0.62	"	20.000		100	85-115			
Lead	102.99	1.2	"	100.00		103	85-115			
Mercury	5.0622	0.50	"	5.0000		101	85-115			
Selenium	100.02	2.5	"	100.00		100	85-115			

**Matrix Spike (1905069-MS1)**

Source: E191906-01

Prepared: 05/14/19 Analyzed: 05/20/19

**EPA 200.8**

Arsenic	42.824	1.2	mg/kg dry	49.476	1.7530	83.0	70-130			
Cadmium	19.466	0.62	"	19.790	0.35414	96.6	70-130			
Lead	202.22	1.2	"	98.951	97.102	106	70-130			
Mercury	4.9428	0.49	"	4.9476	U	99.9	70-130			
Selenium	75.471	2.5	"	98.951	U	76.3	70-130			

**Matrix Spike Dup (1905069-MSD1)**

Source: E191906-01

Prepared: 05/14/19 Analyzed: 05/20/19

**EPA 200.8**

Arsenic	44.092	1.2	mg/kg dry	49.811	1.7530	85.0	70-130	2.92	20	
Cadmium	20.788	0.62	"	19.924	0.35414	103	70-130	6.57	20	
Lead	197.81	1.2	"	99.621	97.102	101	70-130	2.21	20	
Mercury	5.0463	0.50	"	4.9811	U	101	70-130	2.07	20	
Selenium	79.399	2.5	"	99.621	U	79.7	70-130	5.07	20	



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

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980 College Station Road, Athens, Georgia 30605-2700

D.A.R.T. Id: 19-0267

Project: 19-0267, Elm Street Lead - Reported by Floyd Wellborn

**Total Metals (TMTL) - Quality Control**

**US-EPA, Region 4, LSASD**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch 1905069 - M 200.2 Metals Soil**

**MRL Verification (1905069-PS1)**

Prepared: 05/14/19 Analyzed: 05/20/19

**EPA 200.8**

Arsenic	0.10299	0.10	mg/kg dry	0.10000		103	65-135			MRL-3
Cadmium	0.047442	0.050	"	0.050000		94.9	65-135			MRL-3, U
Lead	0.10297	0.10	"	0.10000		103	65-135			MRL-3
Mercury	0.077837	0.040	"	0.080000		97.3	65-135			MRL-3
Selenium	0.17945	0.20	"	0.20000		89.7	65-135			MRL-3, U



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980 College Station Road, Athens, Georgia 30605-2700  
D.A.R.T. Id: 19-0267  
Project: 19-0267, Elm Street Lead - Reported by Floyd Wellborn

**Physical Properties (PHYSP) - Quality Control**  
**US-EPA, Region 4, LSASD**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch 1905064 - M % Solids**

**Duplicate (1905064-DUP1)**

**Source: E191906-08**

Prepared: 05/13/19 Analyzed: 05/14/19

**EPA 200.2**

% Solids	94.293	0.0	%		94.185			0.115	10	
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Region 4 Laboratory Services and Applied Science Division

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D.A.R.T. Id: 19-0267

Project: 19-0267, Elm Street Lead - Reported by Floyd Wellborn

**Notes and Definitions for QC Samples**

U	The analyte was not detected at or above the reporting limit.
B-3	Level in blank does not impact data quality
MRL-3	MRL verification for Soil matrix